## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ATTY.'S DOCKET: PITSON=1A

In re Application of:

Stuart PITSON et al

Appln. No.: 10/642,289

Filed: August 18, 2003

For: SPHINGOSINE KINASE ENZYME

ATTY.'S DOCKET: PITSON=1A

Art Unit:

Washington, D.C.

November 17, 2003

Confirmation No.:

## INFORMATION DISCLOSURE STATEMENT [IDS]

Honorable Commissioner of Patents and Trademarks P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

This Information Disclosure Statement is submitted in accordance with 37 CFR §§1.97, 1.98, and it is requested that the information set forth in this statement and in the listed documents be considered during the pendency of the above-identified application, and any other application relying on the filing date of the above-identified application or cross-referencing it as a related application.

[X] 1. This IDS should be considered, in accordance with 37 CFR §1.97, as it is filed within three months of the filing date of the above-identified national application or within three months of the entry into the national stage of the above-identified international application.

[X] 2. In accordance with 37 CFR §1.98, this IDS includes a list (e.g., form PTO/SB/08A) of all patents, publications, or other information submitted for consideration

by the office, either incorporated into this IDS or as an attachment hereto. A copy of each document listed is attached.

- [X] 3. No explanation of relevance is necessary for documents in the English language (see reply to Comments 67 and 68 in the preamble to the final rules; 1135 OG 13 at 20).
- [ ] 4. Other information being provided for the examiner's consideration follows:

(insert other information)

In accordance with 37 CFR §§1.97(g) and (h), filing of this IDS should not be construed the representation that a search has been made or that information cited is, or is considered to be, material to patentability as defined in §1.56 (b), or that any cited document listed or attached is (or constitutes) prior art. Unless otherwise indicated, the date of publication indicated for an item is taken from the face of the item and Applicants reserve the right to prove that the date of publication is in fact different.

Respectfully submitted,

BROWDY AND NEIMARK

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Substitute t	for form 1449A/PTO			Complete if Known		
				Application Number	10/642,289	
INFO	RMATION D	ISC	CLOSURE	Filing Date	August 18, 2003	
STAT	EMENT BY	AΡ	PLICANT	First Named Inventor	Stuart PITSON et al	
• . ,				Group Art Unit		
	(use as many sheets	as n	ecessary)	Examiner Name		
Sheet	1	of	4	Attorney Docket Number	PITSON=1A	

		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	AM	ALTSCHUL, S., et al; "Basic Local Alignment Search Tool"; J. MOL. BIOL. (1990); Vol. 215; pages 403-410.	
	AN	Alessenko; A. V., "REVIEW: Functions of Sphingosine in Cell Poliferation and Death"; BIOCHEMISTRY (1998); Vol. 63; pages 62-68; [online] [retrieved on August 28, 2003]. Retrieved from Internet: <url: 63010075.htm="" biokhimiya="" contents="" full="" http:="" v63="" www.protein.bio.msu.su=""></url:>	
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-,-,-	AP	BRADFORD; M., "A Rapid and Sensitive Method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding"; ANALYTICAL BIOCHEMISTRY (1976); Vol. 72; pages 248-254.	
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<u> </u>	AR	BUEHRER, Benjamin and Robert Bell; "Sphingosine Kinase: Properties and Cellular Functions"; ADVANCES IN LIPID RESEARCH (1993); Vol. 26; pages 59-67;	
	AS	BUEHRER, B., et al; "Protein Kinase C-dependent Regulation Of Human Erythroleukemia (HEL) Cell Sphingosine Kinase Activity"; BIOCHIMICA ET BIOPHYSICA ACTA (1996); Vol. 1303; pages 233-242.	
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	AV	DUGGLEBY, R.G, "A Nonlinear Regression Program for Small Computers"; ANALYTICAL BIOCHEMIMISTRY (1981); Vol. 110; pages 9-18;	
	AW	GRAHAM, F. L. and A. Van Der Eb; "Transformation of Rat Cells by DNA of Human Adenovirus 5"; VIROLOGY (1973); Vol. 54; pages 536-539;	
	AX	HANKS, S.K., et al; "Conserved Features of the Catalytic Domains"; SCIENCE (1988); Vol. 241; pages 42-52.	

		To
Examiner	Date	
Signature	Considered	

<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. ¹ Applicant's unique citation designation number (optional). ² See Kind Codes of USPTO Patent Documents at <a href="https://www.uspto.gov">www.uspto.gov</a> or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁵ Applicant is to place a check mark here if English language Translation is attached.

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Oubstitute	101 101111 1440/11 10			Application Number	10/642,289	
INFO	RMATION D	ISC	CLOSURE	Fiting Date	August 18, 2003	
STAT	<b>TEMENT BY</b>	AP	PLICANT	First Named Inventor	Stuart PITSON et al	
01711		<i>y</i> wa		Group Art Unit		
	(use as many sheet	ts as n	ecessary)	Examiner Name		
Sheet	2	of	4	Attorney Docket Number	PITSON=1A	

[2		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
xaminer initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T²
	AY	IGARASHI; Yasuyuki, "Functional Roles of Sphingosine 1-Phosphate, and Methylsphingosines: In Regard to Membrane Sphingolipid Signaling Pathways"; <i>J. BIOCHEM.</i> (1997); Vol. 122; pages 1080-1087.	
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	BD	MASAI et al; "Drosophila retinal degeneration A gene encodes an eye-specific diacylglycerol kinase with cysteine-rich zinc-finger motifs and ankyrin repeats"; PROC. NATL. ACAD. SCI. USA (1993); Vol. 90; pages 11157-11161.	
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	BF	MEYER ZU HERINGDORF et al; "Molecular Diversity of Sphingolipid Signalling"; -FEBS LETTERS (1997); Vol. 410; pages 34-38.	
	BG	NAGIEC et al; "The LCB4 (YOR171c) and LCB5 (YLR260w) Genes of Saccharomyces Encode Sphingoid Long Chain Base Kinases"; JOURNAL OF BIOLOGICAL CHEMISTRY, (1998); Vol. 273; No. 31, pages 19437-19442.	
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5	BJ	PONTING et al'; "SMART: Identification And Annotation Of Domains From Signalling And Extracellular Protein Sequences."; NUCLEIC ACIDS RESEARCH (1999); Vol. 27; No. 1, pages 229-232.	

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<sup>\*</sup> EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>&</sup>lt;sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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01711		•	,	Group Art Unit	
	(use as many sheets	as n	ecessary)	Examiner Name	
Sheet	3	of	4	Attorney Docket Number	PITSON=1

1		OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS	
Xaminer	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	ВК	R. REN et al; "Identification of a Ten-Amino Acid Proline-Rich SH3 Binding site"; SCIENCE (February 19, 1993); Vol. 259; pages 1157-1161.	
	BL	RHOADS et al; "Sequence Motifs For Calmodulin Recognition"; FASEB JOURNAL (1997); Vol. 11; pp. 331-340.	0
).	ВМ	SAKANE et al; "The C-terminal Part Of Diacylglycerol Kinase α Lacking Zinc Fingers Serves As A Catalytic Domain"; BIOCHEM. J. (1996); Vol. 318; pages 583-590.	
	BN	SARASTE et al; "The P-loop-a Common Motif in ATP- and GTP- Binding Proteins" TRENDS BIOCHEM. SCI. (November 1990); Vol. 15; pages 430-434.	
	ВО	SCHAAP et al; "Consensus Sequences for ATP-binding Sites In Protein Kinases Do Not Apply To Diacylglycerol Kinases"; BIOCHEMICAL JOURNAL (1994); Vol. 304; pages 661-662.	
	ВР	J. SCHULTZ et al; "SMART, A Simple Modular Architecture Research Tool: Identification Of Signaling Domains"; Proc. Natl, Acad. Sci., USA, (1998); Vol. 95; pages 5857-5864.	
	BQ	SMITH et al; "Measurement of Protein Using Bicinchoninic Acid"; ANALYTICAL BIOCHEMISTRY (1985); Vol. 150; pp. 76-85.	
	BR	SPIEGEL et al; "REVIEW: Roles of Sphingosine-1-phosphate in Cell Growth, Differentiation and Death"; Biochemistry (Mosc) (1998); Vol. 63; pages 69-73; [online] [retrieved on August 28, 2003]. Retrieved from Internet: <url: 63010083.htm="" biokhimiya="" contents="" full="" http:="" v63="" www.protein.bio.msu.su=""></url:>	
	BS	WALKER et al; "Distantly Related Sequences in the α- and β-subunits of ATP Synthase, Myosin, Kinases And Other ATP-Requiring Enzymes And A Common Nucleotide Binding Fold"; <i>EMBO J.</i> , (1982); Vol. 8; pages 945-951; IRL Press Limited, Oxford, England.	
	ВТ	WALL et al; "Factors Influencing Endothelial Cell Proliferation In Vitro"; J. CELL. PHYSIOL., (1978); Vol. 96; pages 203-213.	
	BU	WESSEL et al; "Method for the Quantitative Recovery of Protein in Dilute Solution in the Presence of Detergents and Lipids"; ANALYTICAL BIOCHEMISTRY, (1984); Vol. 138; pages 141-143.	
	BV	XIA et al; "Tumor Necrosis Factor -α Induces Adhesion Molecule Expression Through The Sphingosine Kinase Pathway"; PROC. NATL. ACAD. SCI. USA (November, 1998); Vol. 95; pages 14196-14201; The National Academy of Sciences.	

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	BW	H. YU et al; "Structural Basis for the Binding of Proline-Rich Peptides to SH3 Domains"; CELL (March 1994); Vol. 76; pages 933-945;
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